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| EXAMINER |
|---|
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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 09/706,078 | SQUIRES ET AL. |
| | Examiner | Art Unit | |
| | Thomas J. Mauro Jr. | 2143 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *14 May 2004*.

2a)☒ This action is **FINAL.**    2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,3,6-9,11 and 14-31* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,6-9,11 and 14-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date *20040702*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

**DETAILED ACTION**

1.      Claims 1, 3, 6-9, 11 and 14-21 remain pending.  Claims 2, 4-5, 10 and 12-13 have

been cancelled.  In addition, claims 22-31 have been added.

2.      Claims 1, 3, 6-9, 11 and 14-31 are presented for further examination.  A formal

action on the merits of claims 1, 3, 6-9, 11 and 14-31 follows.

3.      Objections made against the specification and drawings have been withdrawn

receiving the proper corrections.

*Double Patenting*

4.      The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees.  See *In re Goodman*, 11 F.3d
1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed.
Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*,
422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163
USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be
used to overcome an actual or provisional rejection based on a nonstatutory double
patenting ground provided the conflicting application or patent is shown to be commonly
owned with this application.  See 37 CFR 1.130(b).
        Effective January 1, 1994, a registered attorney or agent of record may sign a
terminal disclaimer.  A terminal disclaimer signed by the assignee must fully comply
with 37 CFR 3.73(b).

5.      Claims 1, 3, 6, 9, 22 and 28 are provisionally rejected under the judicially created

doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of

copending Application No. 09/706430. Although the conflicting claims are not identical, they are not patentably distinct from each other because both recite a similar method for allocating print processing jobs to different devices in a print shop environment.

Claim 1 of the instant application recites a system having (1) a plurality of cells comprising a plurality of devices for accomplishing a document processing job, (2) a module that determines workflow for a job, (3) splitting a job into sub-jobs, (4) assigning said sub-jobs to a cell and further (5) splitting a sub-job into lots for processing.

Similarly, claims 16-22 of co-pending application 09/706430 recite (1) dividing resources into cells which have the necessary resources to accomplish a job, (2) determining what tasks need to be performed to complete the given print job, i.e. workflow module, (4) assigning each print job to one or more cells for processing and further (5) splitting the job into lots for processing.

While splitting of jobs into sub-jobs for processing is not explicitly taught, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate splitting a job into sub-jobs in order to provide faster total completion of jobs which require different devices residing on a different cell(s) for completion.

Similarly claims 3, 6, 9, 22 and 28 recite limitations found within the co-pending application.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### *Claim Rejections - 35 USC § 102*

6.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent granted
> on an application for patent by another filed in the United States before the invention by the applicant
> for patent, except that an international application filed under the treaty defined in section 351(a) shall
> have the effects for purposes of this subsection of an application filed in the United States only if the
> international application designated the United States and was published under Article 21(2) of such
> treaty in the English language.

7.      Claims 17-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Hansen

(U.S. 6,509,974).

With respect to claim 17, Hansen teaches a method for assigning sub-jobs to

available cells in a printing workflow system for coordinating document processing jobs,

wherein each of the available cells is comprised of at least one device for printing a

product-type, the method comprising:

identifying maximum capacity of each of the available cells to print the product

type **[Hansen -- Col. 7 lines 36-37, Col. 11 lines 26-30 and Col. 18 lines 46-51 –**

**Capabilities, including capacity of devices, i.e. queues, are known by the workflow**

**management software because it monitors the queues of the various printers to**

**determine if a queue is too big, i.e. maximum capacity by comparing the current**

**capacity to the maximum or full capacity]**;

identifying current loading of each of the available cells to print a product type

**[Hansen -- Col. 18 lines 46-51 – In order for allocator to determine queue is too**

large, i.e. too many jobs exist for that device, current loading information would be required to be known by the allocator];

determining based on the maximum capacity and current loading of each of the available cells a current capacity of each of the available cells to print the product-type [Hansen -- Col. 18 lines 35-43 -- Allocator knows capabilities, i.e. capacity of devices, and the current loading or job queue information, therefore, allocator would inherently know available capacity of the devices]; and

assigning at least one of the available cells for printing the product type based on the current capacity of each of the available cells [Hansen -- Col. 18 lines 29-32 and lines 35-43 -- Allocator knows capabilities, i.e. capacity of devices, and the current loading or job queue information, upon which, allocator chooses how to distribute or best produce a given page and assigns job to that resource. The print server diverts, i.e. assigns, the particular job to a given printer or resource].

With respect to claim 18, Hansen further teaches wherein the print workflow system stores the maximum capacities of each of the available cells in the print workflow system [Hansen -- Col. 11 lines 26-30 and Col. 18 line 48 -- Capabilities, including capacity of devices, i.e. queues, are known by the workflow management software, which would require these values be stored in memory].


With respect to claim 19, Hansen further teaches a pull-type control policy for determining whether a cell can be assigned new document processing jobs [Hansen -- Col. 7 lines 4-5 and lines 36-37 -- Load balancing policies serve to maximize production of output devices by keeping all printers fully utilized].

With respect to claim 20, Hansen further teaches wherein the print workflow system updates the current loading of each available cells **[Hansen -- Col. 11 lines 26-30 and Col. 18 line 48 – Because allocator knows amount of jobs in queue, this would require that as jobs are allocated, the capacity of the queues be updated]**.

With respect to claim 21, Hansen further teaches wherein the print workflow system updates the maximum capacity **[Hansen -- Col. 11 lines 26-30 and Col. 17 lines 43-46 – In order for system to manage workflow properly, capacities and capabilities would be required to be updated as new capabilities become available or as time changes current capacities/capabilities on the devices, i.e. as more jobs are assigned to one device, queue becomes too large and exceeds maximum capacity]**.

## *Claim Rejections - 35 USC § 103*

8.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.      Claims 1, 3, 6, 9, 22, 24-26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smirnov et al. (U.S. 6,546,3664) in view of Mima et al. (US 2002/0101604).

Regarding claim 1, Smirnov teaches a printing workflow system disposed in a

network environment for coordinating production of document processing jobs, said

printing workflow system comprising:

a plurality of autonomous cells, wherein each cell is comprised of a plurality of

devices and resources at least some devices and resources performing distinct operations

from one another, and that are capable of accomplishing at least one type of document

processing job [**Smirnov -- Figure 2, Col. 3 line 67 – Col. 4 lines 1-10 and Col. 7 lines**

**29-67 – Col. 8 lines 1-25 – Plurality of cells, performing independent printing**

**processes, are responsible for completing the book publishing workflow, namely one**

**cell containing a number of different printers, i.e. cover, body, color and black/white**

**printers, and RIPing resources and another cell containing the binding equipment**

**and cutting equipment. These cells contain some different devices for performing**

**different operations for a different type of document processing job, i.e. printing**

**and binding/cutting (finishing jobs)]**; and

a workflow mapping module that determines workflow for a selected one of said

document processing jobs [**Smirnov -- Figures 5 and 6 and Col. 10 lines 22-54 –**

**Scheduler accesses model to produce workflows in response to the various tasks**

**needed to complete an order]**;

Smirnov fails to explicitly teach splitting selected document processing jobs into sub-jobs

to be accomplished by ones of the autonomous cells, assigning said sub-jobs to said given

cells, and receiving the sub-jobs and further splitting said job into lots for processing.

Mima, however, discloses a printing system which breaks up a job to print a document

into sub-jobs of color printing and black/white printing and assigns them to the

appropriate printer **[Mima -- Page 5 paragraphs [0053] and [0055] – Document is received and broke up into the color pages and the black/white pages. Since one color printer, color page(s) is/are sent to that printer. Black/white pages go to black/white printers of which there are two for printing]**. In addition, the sub-job, i.e. black/white printing, is further broken up into two lots to be printed by two separate black/white printers in order to speed up the printing process for faster printing **[Mima -- Page 5 paragraphs [0055-0060] – Because job is scheduled for fast printing, black/white sub-job is further broken up into lots to be processed by two online black/white printers for faster processing]**.

Both Smirnov and Mima are concerned with processing documents based upon device capability and a sub-job workflow.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the splitting selected document processing jobs into sub-jobs to be accomplished by ones of the autonomous cells, assigning said sub-jobs to said given cells, and receiving the sub-jobs and further splitting said job into lots for processing, as taught by Mima into the invention of Smirnov, in order to provide a system which provides for the optimal use of printers and printing resources and further gives rise to greater production and greater use of resources **[Mima -- Page 1 paragraph [0008]]**.

Regarding claim 22, Smirnov-Mima teach the invention substantially as claimed, as aforementioned in claim 1 above, including wherein there is no dependence among said cells and their corresponding devices in that each cell operates autonomously relative

to the other cells **[Smirnov -- Figure 2, Col. 3 line 67 – Col. 4 lines 1-10 and Col. 7**

**lines 29-67 – Col. 8 lines 1-25 – Plurality of cells, performing independent printing**

**processes, are responsible for completing the book publishing workflow, namely one**

**cell containing a number of different printers, i.e. cover, body, color and black/white**

**printers, and RIPing resources and another cell containing the binding equipment**

**and cutting equipment. Because these cells are independent, printing cell works**

**independently from the binding/cutting or finishing cell]**.

Regarding claim 3, Smirnov-Mima teach the invention substantially as claimed,

as aforementioned in claim 22 above, including a storage device for holding information

regarding capacities and capabilities of said cells **[Mima -- Figure 5 and page 4**

**paragraphs [0046-0047] – Table management module is a table storing printer**

**information including capacities, i.e. number of pages per minute printer will**

**handle, and capabilities, i.e. color or black/white]** and for storing information

regarding workflow of each document processing job said workflow comprising a

sequence of operations needed to be performed to accomplish the selected document

processing job **[Mima -- Figure 7 and page 5 paragraphs [0052-0055] – Print control**

**data, i.e. specifications for the print request regarding color, speed, quality, etc., are**

**received and are obviously stored in memory for review by the document monitor to**

**choose the proper printer for the job]**.

Regarding claim 6, Smirnov-Mima teach the invention substantially as claimed,

as aforementioned in claim 3 above, including wherein said product cell controller splits

said sub-jobs into optimal lot sizes determined by analyzing said workflow of said

selected document processing job, wherein said sub-job is split into smaller lots for

optimal utilization of said cell devices such that as one said cell device processes one said

lot another said cell device processes another said lot simultaneously **[Mima -- Page 5**

**paragraphs [0055-0060] – Sub-jobs, i.e. black/white job and color, are further**

**broken up into lots.  Based upon the specifications for the print request, jobs**

**black/white sub-job is further broken down to achieve the desired printing speed by**

**having separate black/white printer print a certain number of pages to meet print**

**speed requested]**.

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Regarding claim 9, Smirnov teaches a method used in a print workflow system

disposed in a network environment for coordinating production of document processing

jobs, said method comprising:

partitioning document processing devices and resources into a plurality of

autonomous cells capable of accomplishing at least one type of document processing job

**[Smirnov -- Figure 2, Col. 3 line 67 – Col. 4 lines 1-10 and Col. 7 lines 29-67 – Col. 8**

**lines 1-25 – Plurality of cells, performing independent printing processes, are**

**responsible for completing the book publishing workflow, namely one cell**

**containing a number of different printers, i.e. cover, body, color and black/white**

**printers, and RIPing resources and another cell containing the binding equipment**

**and cutting equipment.  These cells contain some different devices for performing**

**different operations for a different type of document processing job, i.e. printing**

**and binding/cutting (finishing jobs)]**; and

determining workflow for a selected one of said document processing job

**[Smirnov -- Figures 5 and 6 and Col. 10 lines 22-54 – Scheduler accesses model to produce workflows in response to the various tasks needed to complete an order]**. Smirnov fails to explicitly teach splitting selected document processing jobs into sub-jobs to be accomplished by ones of the autonomous cells; assigning said sub-jobs to said given ones of the autonomous cells capable of accomplishing entire said sub-job and receiving the sub-jobs and further splitting said job into lots for processing.

Mima, however, discloses a printing system which breaks up a job to print a document into sub-jobs of color printing and black/white printing and assigns them to the appropriate printer **[Mima -- Page 5 paragraphs [0053] and [0055] – Document is received and broke up into the color pages and the black/white pages. Since one color printer, color page(s) is/are sent to that printer. Black/white pages go to black/white printers of which there are two for printing]**. In addition, the sub-job, i.e. black/white printing, is further broken up into two lots to be printed by two separate black/white printers in order to speed up the printing process for faster printing **[Mima -- Page 5 paragraphs [0055-0060] – Because job is scheduled for fast printing, black/white sub-job is further broken up into lots to be processed by two online black/white printers for faster processing]**.

Both Smirnov and Mima are concerned with processing documents based upon device capability and a sub-job workflow.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the splitting selected document processing jobs into sub-jobs to be accomplished by ones of the autonomous cells, assigning said sub-jobs to

said given cells, and receiving the sub-jobs and further splitting said job into lots for

processing, as taught by Mima into the invention of Smirnov, in order to provide a

system which provides for the optimal use of printers and printing resources and further

gives rise to greater production and greater use of resources **[Mima -- Page 1 paragraph**

**[0008]]**.

Regarding claim 24, Smirnov-Mima teach the invention substantially as claimed,

as aforementioned in claim 22 above, including wherein ones of said autonomous cells

include at least one said device not included in other ones of said autonomous cells

**[Smirnov -- Figure 2, Col. 3 line 67 – Col. 4 lines 1-10 and Col. 7 lines 29-67 – Col. 8**

**lines 1-25 – Plurality of cells, performing independent printing processes, are**

**responsible for completing the book publishing workflow, namely one cell**

**containing a number of different printers, i.e. cover, body, color and black/white**

**printers, and RIPing resources and another cell containing the binding equipment**

**and cutting equipment. These cells contain some different devices for performing**

**different operations for a different type of document processing job, i.e. printing**

**and binding/cutting (finishing jobs)]**.

Regarding claim 25, Smirnov-Mima teach the invention substantially as claimed,

as aforementioned in claim 3 above, including wherein the workflow module **[Smirnov -**

**- Figures 5 and 6 and Col. 10 lines 22-54 – Scheduler accesses model to produce**

**workflows in response to the various tasks needed to complete an order]** uses said

information to determine a workflow for a selected document processing job **[Mima --**

**Page 4 paragraphs [0046-0047] – Information regarding printing capabilities is**

**stored to use to decide which printer(s) to send jobs to based upon job**

**specifications]** and the job decomposition module uses said workflow to split said

document processing job into autonomous sub-jobs **[Mima -- Page 5 paragraphs [0053]**

**and [0055] – Document is received and broke up into the color pages and the**

**black/white pages based upon the specified parameters of the print request. Since**

**one color printer, color page(s) is/are sent to that printer. Black/white pages go to**

**black/white printers of which there are two for printing]**.


Regarding claim 26, Smirnov-Mima teach the invention substantially as claimed,

as aforementioned in claim 25 above including wherein the cell assignment module uses

said workflow to assign said autonomous sub-jobs to given ones of said autonomous cells

capable of accomplishing entire said sub-job **[Mima -- Page 5 paragraphs [0053] and**

**[0055] – Document is received and broke up into the color pages and the black/white**

**pages based upon the specified parameters of the print request. Since one color**

**printer, color page(s) is/are sent to that printer. Black/white pages go to black/white**

**printers of which there are two for printing. Thus, based upon the desired tasks to**

**be completed, assignment of a sub-job to a cell is based upon what needs to be done,**

**i.e. printing must go to the printing cell, and binding must go to the cell containing**

**the finishing equipment, i.e. binder and cutter, etc.]**.

Regarding claim 28, this is a method claim similar to the system claimed in claim 22 above. It has similar limitations; therefore, claim 28 is rejected under the same rationale.

10.     Claims 7-8, 11, 14-16, 27 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smirnov et al. (U.S. 6,546,3664) and Mima et al. (US 2002/0101604), as applied to claim 6 above, in view of Chi (U.S. 5,751,580).

Regarding claim 7, Smirnov-Mima teach the invention substantially as claimed, as aforementioned in claim 6 above, but fails to explicitly the use of kanbans as workflow control elements.

Chi, however, teaches a control system for computer control of workflow in an automatic process containing a plurality of workstations which employs the use of a kanban token system for controlling workflow processes by giving each job or sub-job a number of tokens which are then freed up upon completion and sent back upstream to be given to the next job [Chi -- Col. 1 lines 42-64 and Col. 3 lines 2-8].

Smirnov-Mima and Chi all are concerned with workflow processing of jobs in an automatic process environment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of kanbans as workflow control elements, as taught by Chi into the invention of Smirnov-Mima, in order to manage the dispatching of

jobs and to maintain a balanced flow or work as well as maximum equipment utilization **[Chi -- Col. 1 lines 32-33 and lines 61-64]**.


Regarding claim 8, Smirnov-Mima-Chi teach the invention substantially as claimed, as aforementioned in claim 7 above, including wherein said cell devices send authorization to upstream devices to supply said cell devices with next said lot **[Chi -- Col. 1 lines 47-57 – Once lot is completed by device, device releases, i.e. frees, token and it is sent back upstream to accept another lot from the kanban]**.


Regarding claim 11, Smirnov-Mima-Chi teach the invention substantially as claimed, as aforementioned in claim 27, including holding information regarding capacities and capabilities of said cells **[Mima -- Figure 5 and page 4 paragraphs [0046-0047] – Table management module is a table storing printer information including capacities, i.e. number of pages per minute printer will handle, and capabilities, i.e. color or black/white]** and for storing information regarding workflow of each document processing job, said workflow being comprised of a sequence of operations needed to be performed to accomplish the selected document processing job **[Mima -- Figure 7 and page 5 paragraphs [0052-0055] – Print control data, i.e. specifications for the print request regarding color, speed, quality, etc., are received and are obviously stored in memory for review by the document monitor to choose the proper printer for the job]**.

Regarding claim 14, Smirnov-Mima-Chi teach the invention substantially as claimed, as aforementioned in claim 11 above, including splitting said sub-job into optimal lot sizes determined by analyzing said workflow of said selected document processing job, whereby said sub-job is split into smaller lots for optimal utilization of said cell devices **[Mima -- Page 5 paragraphs [0055-0060] – Sub-jobs, i.e. black/white job and color, are further broken up into lots. Based upon the specifications for the print request, jobs black/white sub-job is further broken down to achieve the desired printing speed by having separate black/white printer print a certain number of pages to meet print speed requested]**.

Regarding claim 15, Smirnov-Mima-Chi teach the invention substantially as claimed, as aforementioned in claim 14 above, including wherein said receiving step assigns a number of kanbans to said lots as workflow control elements **[Chi -- Col. 1 lines 42-64 and Col. 3 lines 2-8 – Kanban tokens are assigned to lots to manage workflow and job execution]**.

Regarding claim 16, Smirnov-Mima-Chi teach the invention substantially as claimed, as aforementioned in claim 15 above, including wherein said receiving step further comprises sending authorization from cell devices to upstream devices to supply said selected cell devices with next said lot **[Chi -- Col. 1 lines 47-57 – Once lot is completed by device, device releases, i.e. frees, token and it is sent back upstream to accept another lot from the kanban]**.

Regarding claim 27, Smirnov-Mima-Chi teach the invention substantially as claimed, as aforementioned in claim 8 above, including wherein said assigned kanbans are released as said lots are processed and said assigned kanbans become available for future authorization of said lots **[Chi -- Col. 1 lines 42-64 – Upon completion of processing of a lot, the token from the kanban is freed and is sent upstream for assignment to another lot for processing]**.

Regarding claim 29, this is a system claim similar to the system claimed in claim 25 above. It has similar limitations; therefore, claim 29 is rejected under the same rationale.

Regarding claim 30, Smirnov-Mima-Chi teach the invention substantially as claimed, as aforementioned in claim 29 above, including wherein the cell step of assigning uses said workflow to assign said autonomous sub-jobs to given ones of said autonomous cells capable of accomplishing entire said sub-job **[Mima -- Page 5 paragraphs [0053] and [0055] – Document is received and broke up into the color pages and the black/white pages based upon the specified parameters of the print request. Since one color printer, color page(s) is/are sent to that printer. Black/white pages go to black/white printers of which there are two for printing. All of this is based upon the capabilities of the cell devices and the print specification received]**.

Regarding claim 31, Smirnov-Mima-Chi teach the invention substantially as claimed, as aforementioned in claim 16 above further comprising releasing said assigned

kanbans as said lots are processed, whereby said assigned kanbans become available for future authorization of said lots **[Chi -- Col. 1 lines 42-64 – Upon completion of processing of a lot, the token from the kanban is freed and is sent upstream for assignment to another lot for processing]**.

11.     Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smirnov et al. (U.S. 6,546,3664) and Mima et al. (US 2002/0101604), as applied to claim 22 above, in view of Tomory (U.S. 5,815,764).

Regarding claim 23, Smirnov-Mima teach the invention substantially as claimed, as aforementioned in claim 22 above, however do not explicitly teach the grouping of devices into cells as specified, namely a first cell containing a printer and a binder and a second cell containing a copier and a collator.

Smirnov, however, does teach the devices of a printer and a binder **[Smirnov -- Figure 2 and Col. 4 lines 1-17, Col. 7 lines 51-55 and Col. 7 lines 65-67 – Col. 8 lines 1-6 – Both printer and binders are used independently within the system to accomplish jobs]**.

In addition, Tomory teaches a job routing system for a printing system which employs the use of such well-known and common publishing devices such as copiers and collators **[Tomory -- Col. 2 lines 3-9 and lines 18-28, Col. 6 lines 58-62 and Col. 10 lines 14-17]**.

While neither Smirnov-Mima nor Tomory explicitly teach the arrangement of the cells as indicated in the claim, it would have been obvious to arrange the devices into cells in any order necessary in order to provide a variety of printing services. No unexpected results are obtained by grouping them in any particular order, thus it would have been obvious to arrange the devices into cell groups which include a printer and a binder and a copier and a collator in order to provide a printing system which separates devices based upon function such as printing and finishing and document duplication which allows for an efficient system that produces the publishers desired results.

Furthermore, it has been upheld in *In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950),* that the mere rearrangement of parts does not in itself distinguish over the prior art when no unexpected results are obtained.

### *Response to Arguments*

12.    Applicant's arguments with respect to claims 1, 6-9 and 14-16 have been considered but are moot in view of the new ground(s) of rejection.

### *Conclusion*

13.    The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Owa et al. (U.S. 6,348,971) discloses a printer selection device within a printing system for choosing the proper printer based upon document specifications.

14.　Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.  Accordingly, **THIS ACTION IS MADE FINAL**.  See MPEP § 706.07(a).  Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action.  In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action.  In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mauro Jr. whose telephone number is 703-605-1234.  The examiner can normally be reached on M-F 8:00a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 703-308-5221.  The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system.  Status information for

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have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

TJM
August 9, 2004

DAVID WILEY
SUPERVISORY PATENT EXAMINER
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